NASDAQ: **IDYA**

IDEAYA Biosciences

Improving Lives Through Transformative Precision Medicine

Darovasertib (IDE196) Investor Day

April 16, 2021

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This presentation concerns anticipated products that are under clinical investigation and which have not yet been approved for marketing by the U.S. Food and Drug Administration (FDA). It is currently limited by Federal law to investigational use, and no representation is made as to its safety or effectiveness for the purposes for which it is being investigated.

Welcome to our Participants and Guest Speakers

Darovasertib (IDE196) Investor Day – April 16, 2021

Meredith McKean, M.D.
Sarah Cannon Research Institute at Tennessee Oncology, Associate Director, Melanoma and Skin Cancer Research

Richard Carvajal, M.D.
Columbia University Irving Medical Center, Director of Experimental Therapeutics and Director of the Melanoma Service

Agenda

Darovasertib (IDE196) Clinical Update

Opening Remarks

Yujiro Hata

Darovasertib Monotherapy Clinical Data Update in Solid Tumors

Dr. Meredith McKean

Darovasertib + Binimetinib Combination Therapy Early Clinical Data Update

Dr. Richard Carvajal

Darovasertib Development Plan

Dr. Matt Maurer

Competitive Landscape and Concluding Remarks

Yujiro Hata

Analyst Q&A

Yujiro Hata

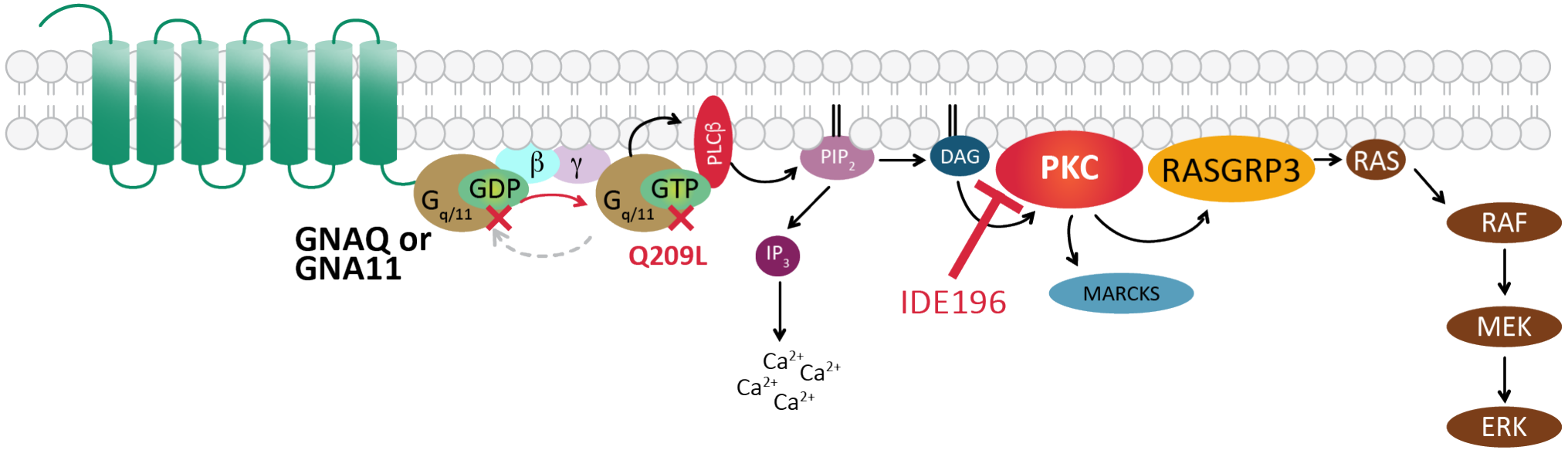
Darovasertib (IDE196) Monotherapy Clinical Data Update in Solid Tumors

Darovasertib shows Efficacy as Monotherapy in MUM and GNAQ/11 Skin Melanoma

Meredith McKean, M.D., MPH
Associate Director, Melanoma and Skin Cancer Research,
Sarah Cannon Research Institute at Tennessee Oncology, Nashville, TN

Mutations in Small GTPases, *GNAQ* or *GNA11*, can Lead to PKC Activation

Activation of PKC signaling pathway is a genetic driver of cancer



- Mutations in small GTPases, *GNAQ* or *GNA11*, can lead to a gain-of-function activation of PKC signaling
  - Found in ≥ 90% of uveal melanoma patients
  - Hotspot & non-hotspot mutations have been identified in multiple solid tumors

Sources: Van Raamsdonk, CD, et. al, Nature 2009; Van Raamsdonk CD, et. al, NEJM 2010; Piperno-Neumann S, et. al, J Clin Oncol 2014

Potential First-in-Class Protein Kinase C (PKC) Inhibitor

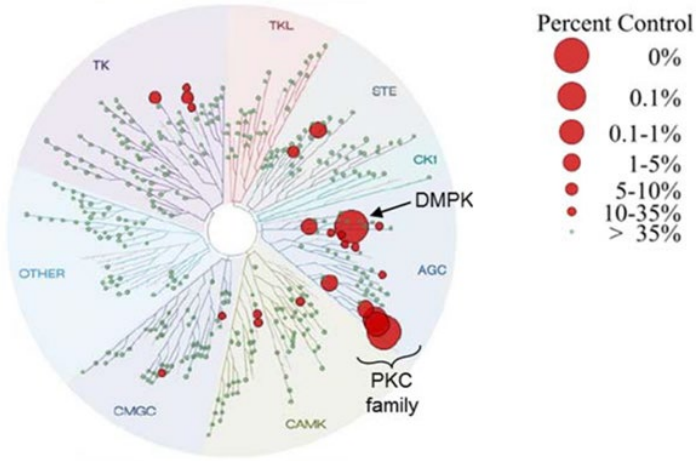
Darovasertib is a potent, selective, orally-administered, small molecule PKC inhibitor

Darovasertib is Potent and Selective

IDE196 potency across key PKC Isoforms

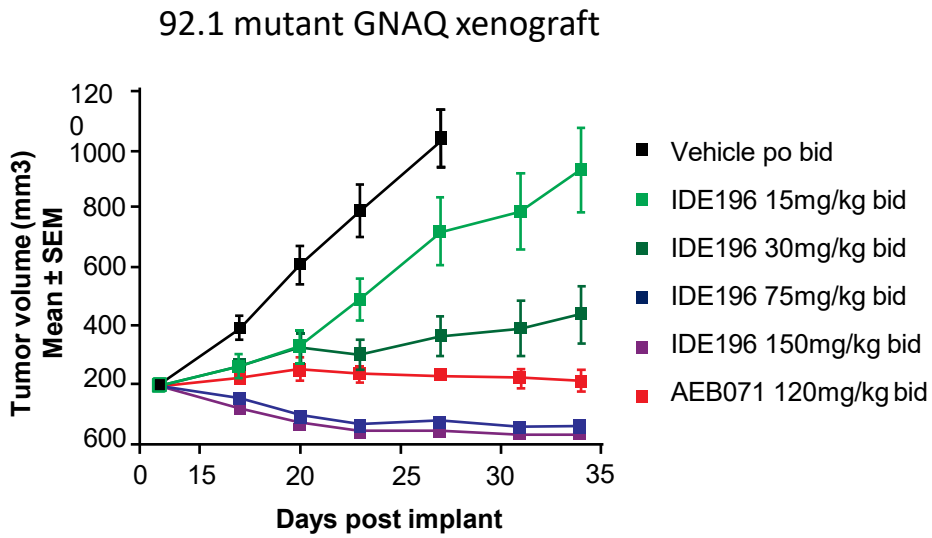
IDE196 IC_{50} (nM) PKC Activity								
Classical				Novel				Atyp.
alpha	beta 1	beta 2	gamma	delta	epsilon	eta	theta	zeta
25	66	58	11	4	3	1	3	>2000

IDE196 Kinome Selectivity



Monotherapy *In vivo* Efficacy in Xenograft Models

IDE196 tumor regression in GNAQ/11 xenografts



AEB071 = Novartis 1st generation PKC inhibitor

Darovasertib Monotherapy BID Adverse Event (AE) Summary

AE profile is similar to previously reported and generally well tolerated

Monotherapy Safety Profile

(IDE196-001 NCT03947385)

- AEs are generally low grade and manageable
- Most common AEs include nausea, vomiting, and diarrhea
- No treatment related deaths
- Safety profile consistent with previously reported

Darovasertib (IDE196) BID Adverse Events

All-cause AEs reported in at least 10% of patients treated with darovasertib (300-400 mg BID)

All Patients (n=59)	All Grades n (%)	Grade 3/4 n (%)
Total subjects with an event	57 (96.6)	21 (35.6)
Nausea	43 (72.9)	1 (1.7)
Diarrhoea	37 (62.7)	1 (1.7)
Vomiting	35 (59.3)	2 (3.4)
Fatigue	20 (33.9)	1 (1.7)
Oedema peripheral	14 (23.7)	0
Abdominal pain	12 (20.3)	0
Abdominal distension	10 (16.9)	0
Aspartate aminotransferase increased	9 (15.3)	5 (8.5)
Dermatitis acneiform	9 (15.3)	0
Pyrexia	9 (15.3)	0
Alanine aminotransferase increased	8 (13.6)	3 (5.1)
Back pain	8 (13.6)	0
Dizziness	8 (13.6)	0
Pruritus	8 (13.6)	0
Anaemia	7 (11.9)	2 (3.4)
Constipation	7 (11.9)	1 (1.7)
Decreased appetite	7 (11.9)	0
Hypotension	7 (11.9)	0
Rash maculo-papular	7 (11.9)	0

IDEAYA Data (preliminary analysis of unlocked database)

Darovasertib Monotherapy BID Experience in MUM

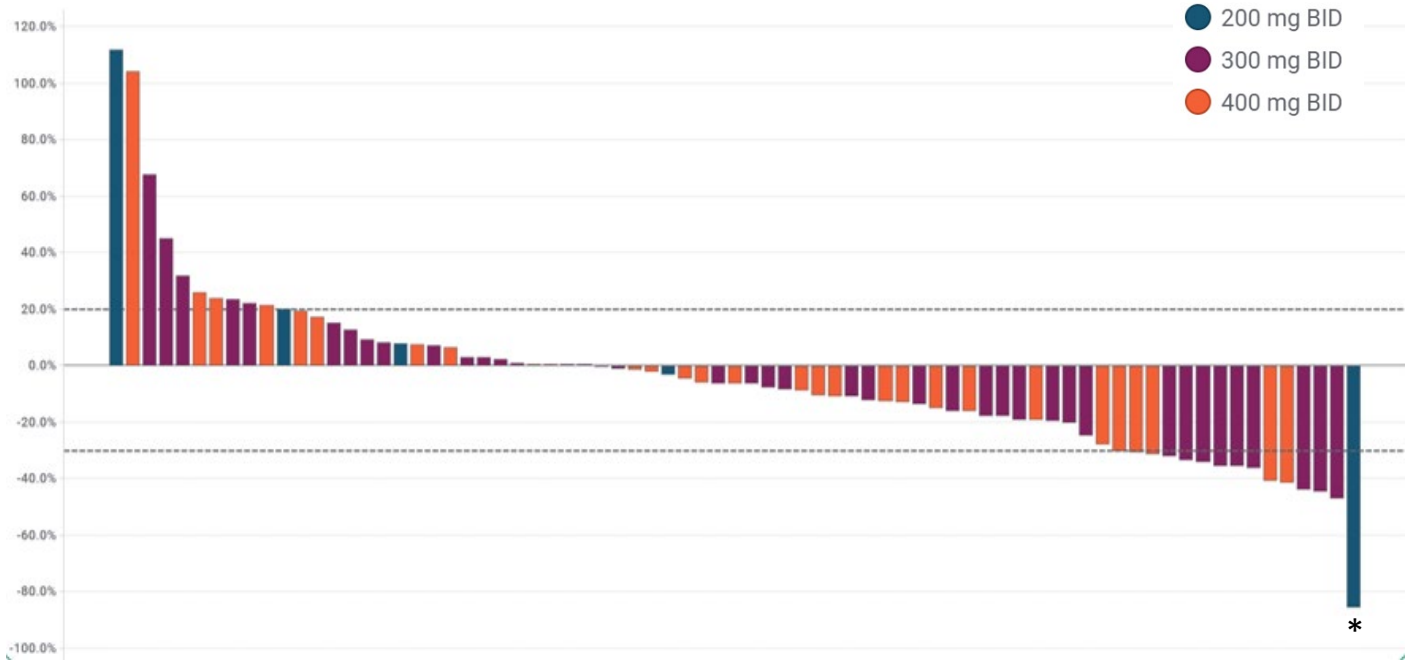
Tumor reduction observed in 61% of evaluable patients (n=75)

IDE196: Tumor Reduction in MUM

- Pooled Analysis IDEAYA + Novartis Clinical Data BID Monotherapy
- n = 81 with 75 evaluable patients
- 46 patients (61%) with target lesion reduction
- 15 patients (20%) with ≥30% target lesion reduction

Darovasertib (IDE196) BID in MUM

n=81 (75 patients with ≥ 1 post-baseline scan)



* Patient achieved CR and on treatment > 3.5 yrs

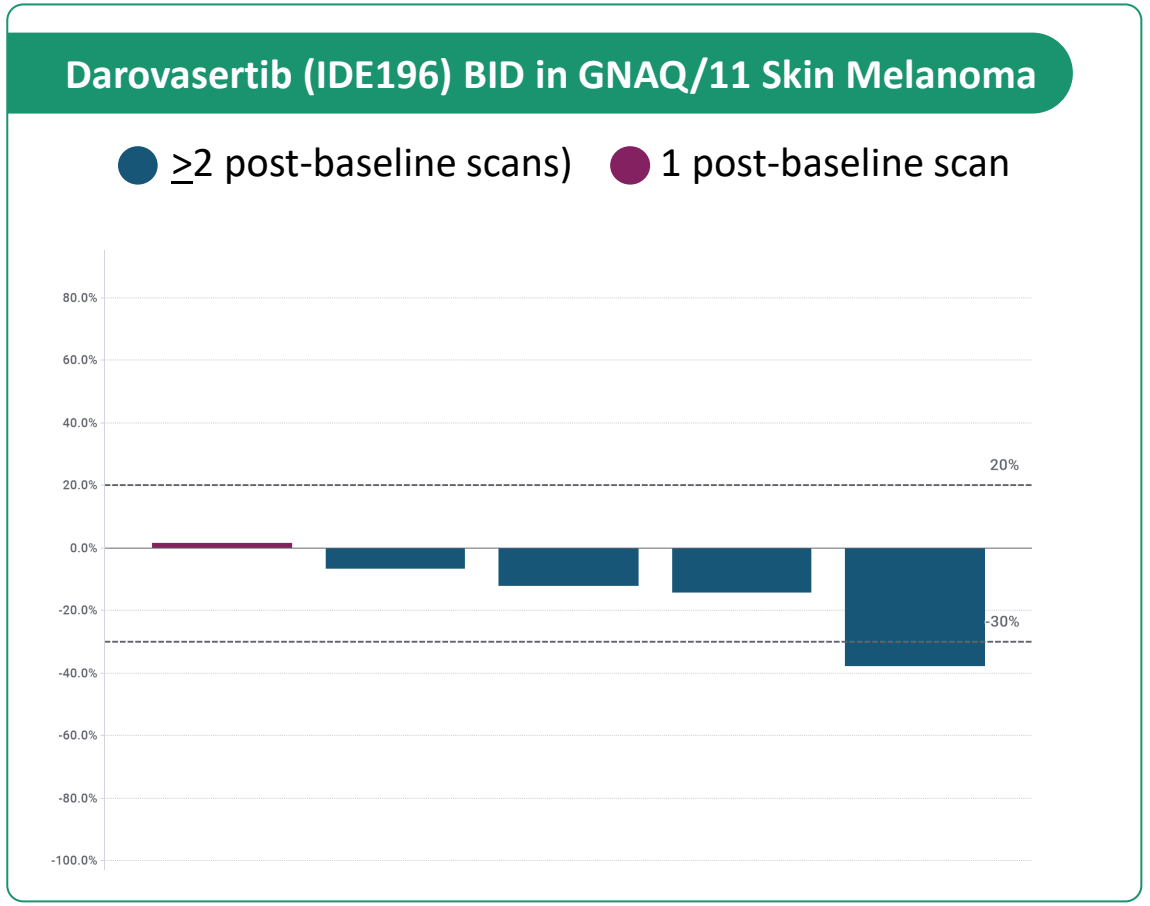
IDEAYA Data (investigator reported, preliminary analysis of unlocked database)

Darovasertib Monotherapy BID Activity in GNAQ/11 Skin Melanoma

Tumor Reduction observed in 80% of Evaluable Patients (n=5)

IDE196: Tumor Reduction in GNAQ/11 Cutaneous Melanoma

- n = 7 with 5 evaluable patients
- 4 patients (80%) with target lesion reduction
- 1 confirmed PR patient (20%) with ≥30% target lesion reduction



IDEAYA Data (investigator reported, preliminary analysis on unlocked database)

Darovasertib Monotherapy BID Overall Survival in MUM

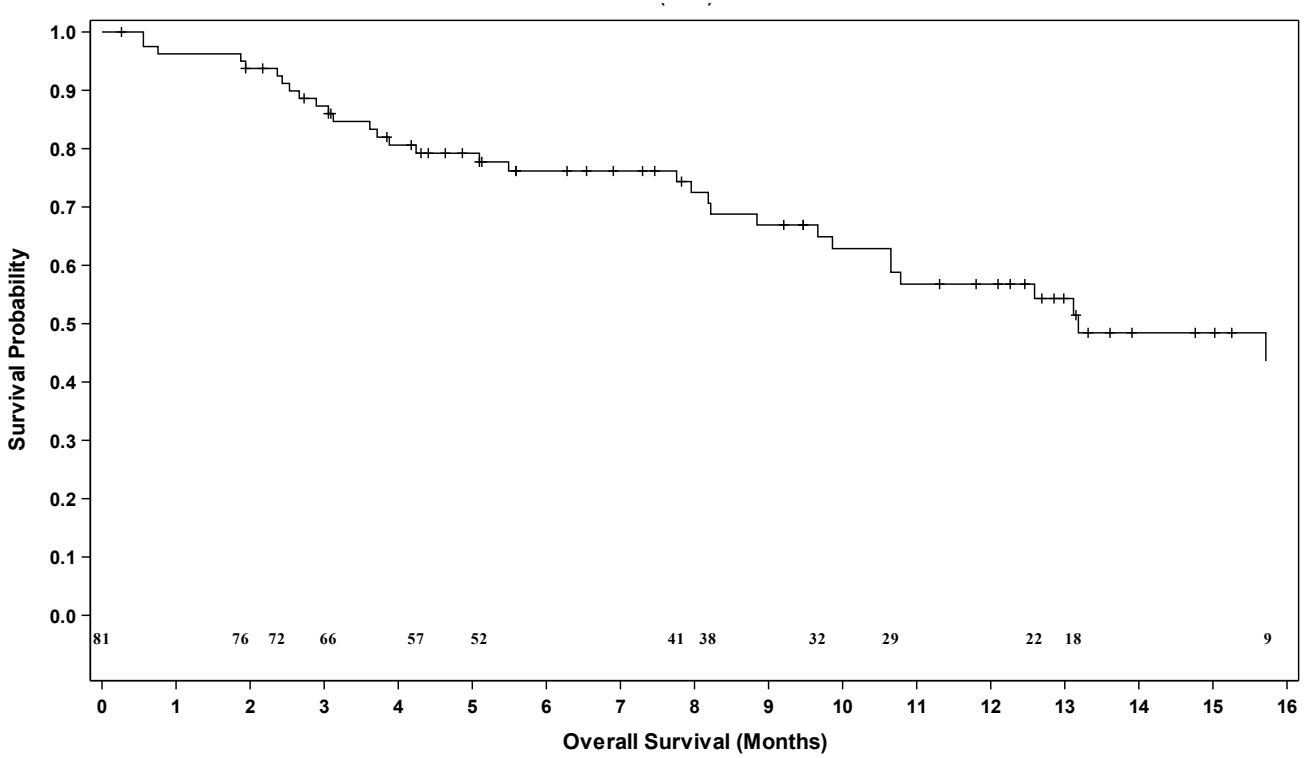
Observed 57% 1-Year Overall Survival (OS) and 13.2 months Median OS

IDE196: Overall Survival in MUM

- Pooled Analysis IDEAYA + Novartis Clinical Data BID Monotherapy
- Predominantly 2L / 3L and heavily pre-treated (out to 7L / 8L of prior treatment) MUM patients
- 57% 1-Year OS observed with 95% CI (44%, 69%)
  - Historical 1-Year OS: 37%*
- Median OS of 13.2 months with 95% CI (10.7 months, Not Reached)
  - Historical median OS: ~7 months*

Darovasertib (IDE196) BID Overall Survival in MUM

n=81



IDEAYA Data (preliminary analysis of unlocked database)

* Historical 1-Year OS and Median OS: Immunocore 2019 Corporate Presentation (Rantala 2019) – Synthetic Control Arm

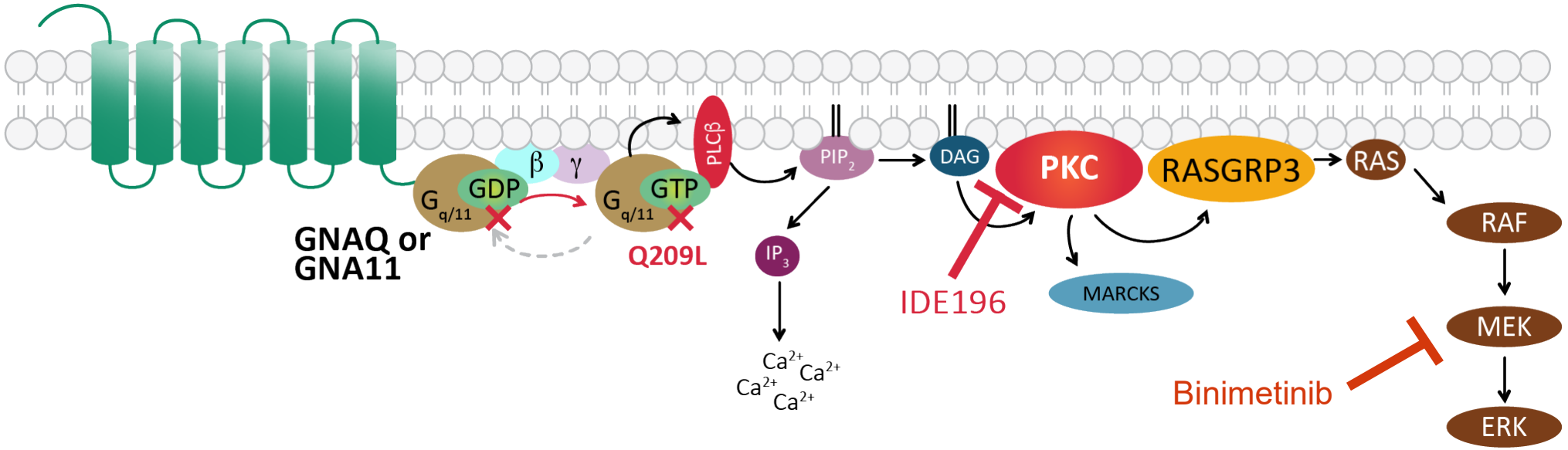
Darovasertib (IDE196) + Binimetinib Combination Therapy

Combination Rationale and Early Efficacy Experience

Richard Carvajal, M.D.
Co-Leader, Precision Oncology and Systems Biology Program, Director of Experimental Therapeutics and Director of the Melanoma Service,
Columbia University Irving Medical Center

Rationale for Darovasertib and Binimetinib Combination Therapy

Targeting multiple nodes in activated oncogenic pathway: PKC and MEK

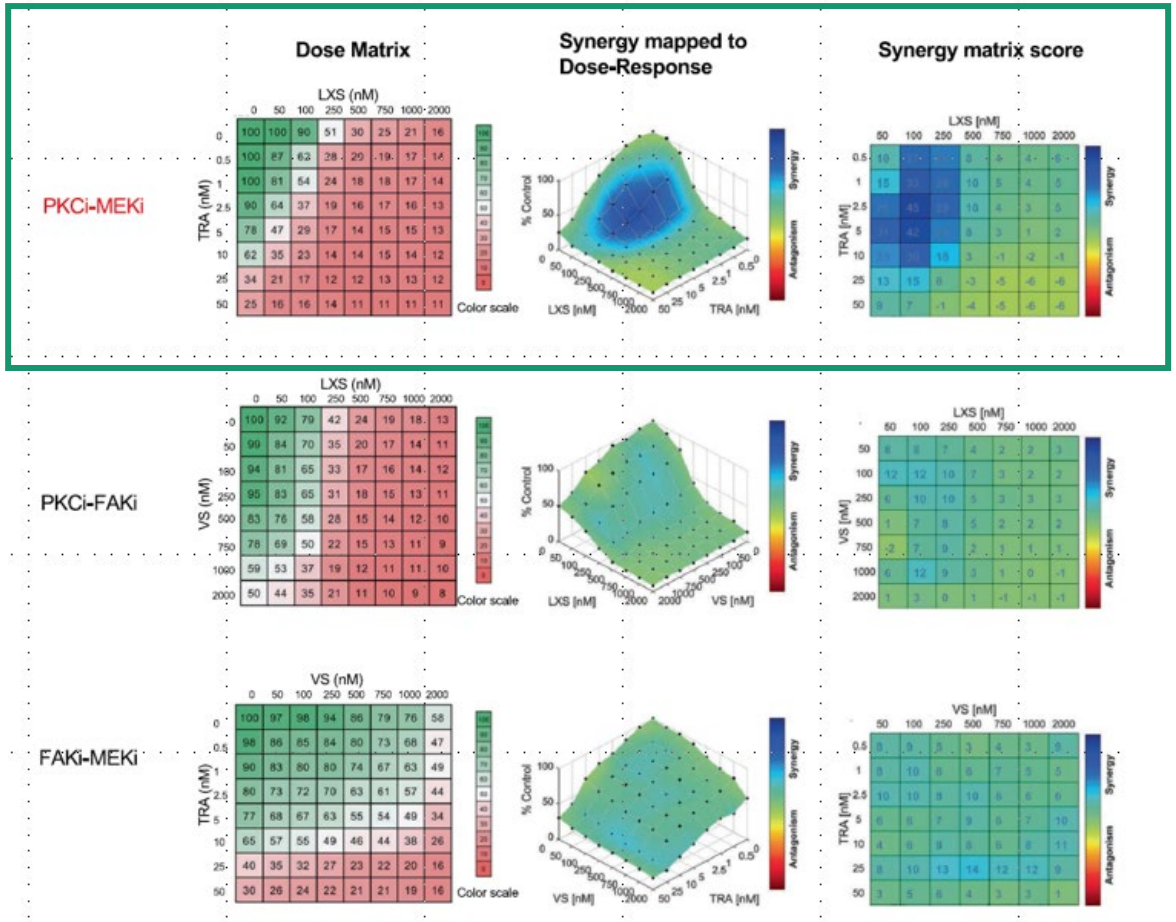


- Cooperative inhibition of signaling in activated PKC/MEK pathway
- Prevention of feedback signals

Sources: Van Raamsdonk, CD, et. al, Nature 2009; Van Raamsdonk CD, et. al, NEJM 2010; Piperno-Neumann S, et. al, J Clin Oncol 2014

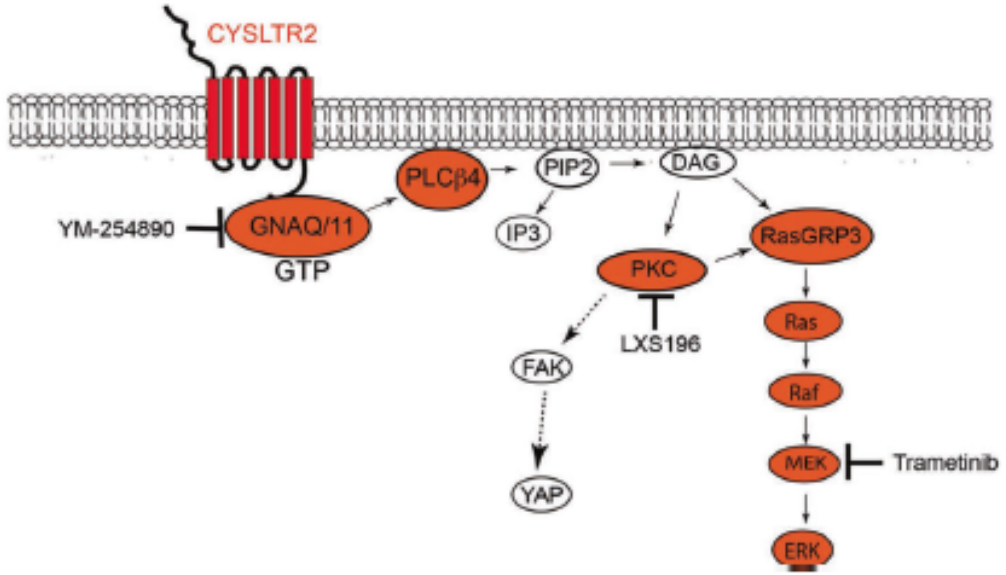
PKC and MEK as the Dominant Pathway in GNAQ/11 mutation MUM

Combined inhibition of PKC and MEK is Synergistic



Oncogene Vol. 40, 806–820 (2021)

PKC + MEK hypothesized to be the dominant effector pathway downstream of GNAQ/11



- PKC+MEK demonstrates robust preclinical synergy in GNAQ/11 MUM cell lines vs PKC+FAK or FAK+MEK
- FAK downstream of PKC versus adjacent in the pathway

Oncogene Vol. 40, 806–820 (2021)

IDE196 and Binimetinib synergistically inhibit viability of Uveal Melanoma Mel-202 cell lines

(IDEAYA Data, AACR2019)

Darovasertib + Binimetinib Combination Experience in MUM

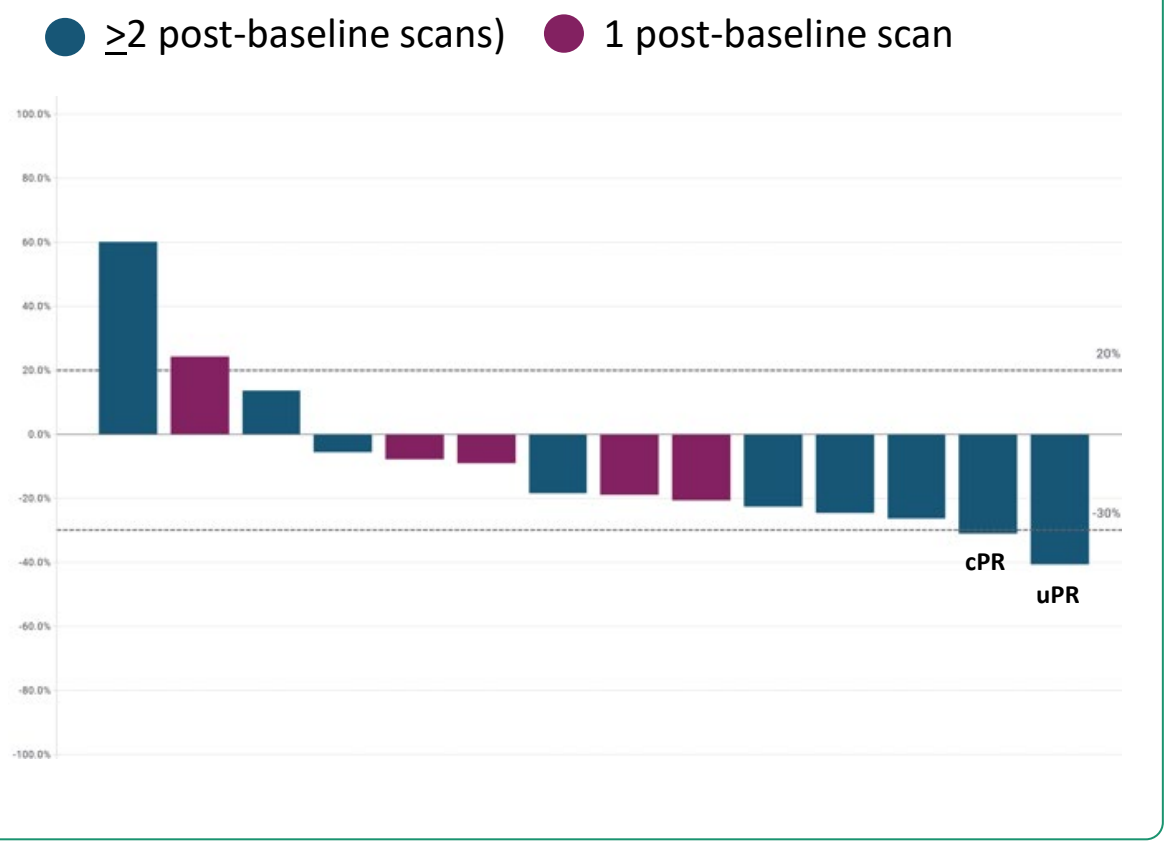
79% of Patients show Tumor Reduction and Early Partial Responses Observed

Darovasertib and Binimetinib Combination *

Daro + Bini Tumor Reduction in MUM

- n = 24 with 14 evaluable patients
- 79% of evaluable patients observe tumor reduction
- 2 partial responses (PR), including 1 confirmed PR, out of nine patients with ≥ 2 post-baseline scans (22%)
  - 1 unconfirmed PR (-40.5%) awaiting confirmatory scan
- Historical response rates in MUM range from zero to low- to mid-single-digit percent
- ORR assessment remains immature as predominantly only 1 or 2 post baseline scans
- Preliminary combination data shows potential for earlier and deeper responses vs IDE196 monotherapy
- Treatment-related side effects of darovasertib and binimetinib combination include: nausea, vomiting, diarrhea, rash, edema, AST/ALT increase and CK increase (>10%); and hypotension (<10%)
- Program Goal: >20% ORR & enhance survival vs IDE196 monotherapy

Darovasertib (IDE196) + Binimetinib in MUM

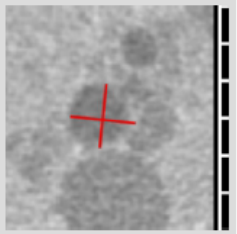
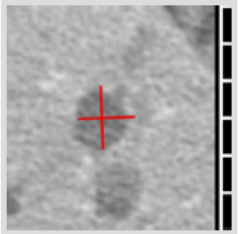
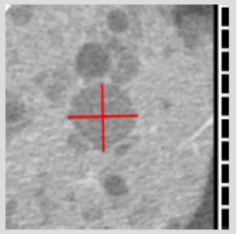
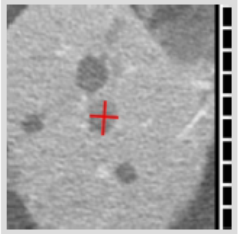
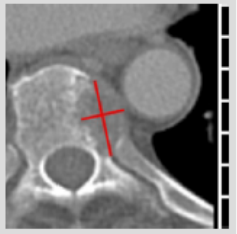
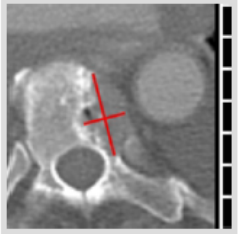


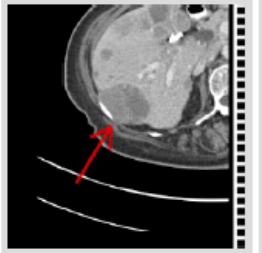
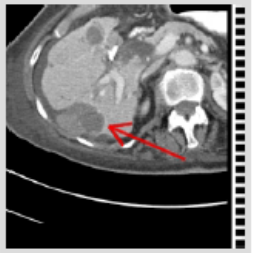
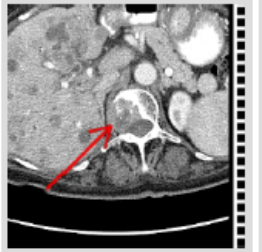
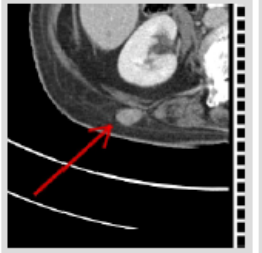
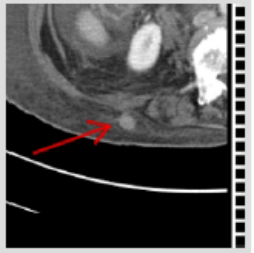
IDEAYA Data (investigator reported, preliminary analysis of unlocked database)

* Pfizer Clinical Trial Collaboration and Supply Agreement for darovasertib + binimetinib and for darovasertib + crizotinib combinations; IDEAYA retains all darovasertib (IDE196) Commercial Rights

MUM Patient on Darovasertib (IDE196) + Binimetinib Combination

High burden of disease and shows early tumor reduction (-20.5%) at 1st follow-up

	Baseline (0 1/13/2021)	Follow-up 1 (03/11/2021)
Target lesions		
T01 Segment 8 liver lesion (more anterior) Liver Segment VIII Size	 LA: 18 mm SA: 17 mm	 LA: 17 mm (-5.6% ΔP) SA: 15 mm (-11.8% ΔP)
T02 Segment 8 liver lesion (more posterior) Liver Segment VIII Size	 LA: 31 mm SA: 30 mm	 LA: 15 mm (-51.6% ΔP) SA: 13 mm (-56.7% ΔP)
T03 Soft tissue component of T9 vertebral body osseous lesion Bone vertebrae thoracic Size	 LA: 24 mm SA: 14 mm	 LA: 26 mm (+8.3% ΔP) SA: 13 mm (-7.1% ΔP)

	Baseline (0 1/13/2021)	Follow-up 1 (03/11/2021)
Non-target lesions		
NT01 Numerous additional liver lesions Liver Size	 Present	 Present
NT02 Numerous additional osseous lesions Bone Size	 Present	Not assessed
NT03 Soft tissue lesions in the chest and abdominal wall Soft tissue abdominal wall Size	 Present	 Present

Darovasertib (IDE196) Clinical Development Plan

Matthew Maurer, M.D.
Head of Clinical Oncology and Medical Affairs, IDEAYA Biosciences

Potential Darovasertib Clinical Development Paths and Progression

Opportunity to Develop in MUM 2L/3L and/or MUM 1L

Darovasertib (IDE196) Combination Clinical Development Plan

Evaluation of Combination Regimens in MUM 2L/3L

Darovasertib + Binimetinib (ongoing)

Darovasertib + Crizotinib (ongoing)

Potential Accelerated Approval Pathway in MUM 2L/3L

Select best combination regimen for potential accelerated approval enabling single arm study targeting ORR > 20% with DoR

Potential Approval Pathway in MUM 1L, including Accelerated Approval

Ongoing data assessment → consider single arm or randomized trial evaluating IDE196 combination regimen in MUM 1L with ORR and/or OS endpoint

Patient Need

- High unmet medical need with no FDA approved therapies
- Applies to entire population of MUM patients, independent of HLA status
- Potential for substantial improvement over available therapies and historical experience

Darovasertib (IDE196) Monotherapy and Darovasertib (IDE196) + Binimetinib Combination Therapy

MUM Competitive Landscape and Closing Remarks

Yujiro Hata
CEO, IDEAYA Biosciences

1- Year % Overall Survival Analysis in MUM and Product Profile

Darovasertib (IDE196) has Differentiated Product Profile

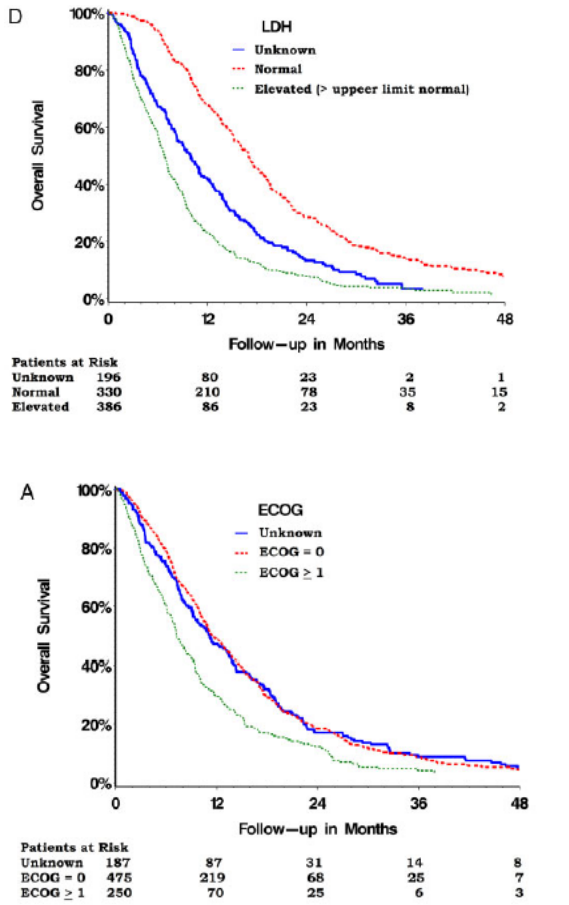
Agent	IDE196 Monotherapy	IDE196 + Bini Combo	IMCgp100*
Study Name	NCT03947385 / NCT02601378	NCT03947385	IMCgp100-102
Population	Predominantly 2L / 3L or later (out to 7L / 8L) (81 MUM)	Predominantly 2L / 3L or later (24 MUM)	2+ Lines (127 MUM)
Patient Selection	All MUM	All MUM	HLA-A2-0201 positive (~40-50% of MUM)
Drug Form	Oral Tablets	Oral Tablets	Weekly IV Infusion
Design	Single Arm Phase 1/2	Single Arm Phase 1/2	Single Arm Phase 2
Comparator Arm	NA	NA	Across Trial Comparison*
% of Pts w Tumor Reduction	**61%**	**79%**	**44%**
1 Year OS Rate	**57%**	**TBD**	**62% vs 37%***

IDEAYA Data (preliminary analysis of unlocked database)
*Historical 1-Year OS and Median OS: Immunocore 2019 Corporate Presentation (Rantala 2019) – Synthetic Control Arm

1- Year % Overall Survival Analysis in MUM

Overall Survival impact in MUM by LDH & ECOG Status

Agent	Darovasertib (IDE196) Monotherapy	IMCgp100*
Study Name	NCT03947385 / NCT02601378	IMCgp100-102
LDH > ULN** Patients on Study	**64%**	**58%**
ECOG O** Patients on Study	**75%**	**70%**
Population	Predominantly 2L / 3L or later (out to 7L / 8L) (81 MUM)	2+ Lines (127 MUM)
Patient Selection	All MUM	HLA-A2-0201 positive (~40-50% of MUM)
Drug Form	Oral Tablets	Weekly IV Infusion (IMCgp100)
Design	Single Arm Phase 1/2	Single Arm Phase 2
Comparator Arm	NA	Across Trial Comparison*
1 Year OS Rate	57%	62% vs 37%*



LDH & ECOG Scores for Patients on Study**

- Elevated LDH has been correlated with poorer Overall Survival in MUM
- Worse ECOG has been correlated with poorer Overall Survival in MUM
- IDEAYA study with similar population as IMCgp100-102 study

**Khoja, Meta-Analysis in MUM, Annals of Oncology (May 2019)

IDEAYA Data (preliminary analysis of unlocked database)

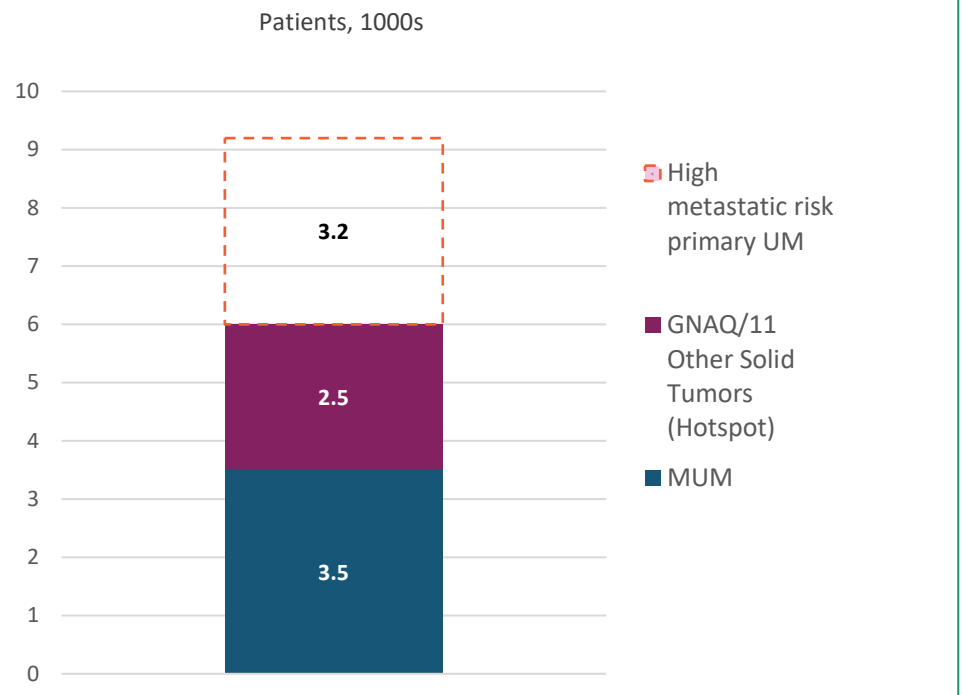
*Historical 1-Year OS and Median OS: Immunocore 2019 Corporate Presentation (Rantala 2019) – Synthetic Control Arm; **Khoja 2019

IDE196 Market Analysis

MUM and GNAQ/GNA11 Other Solid Tumors

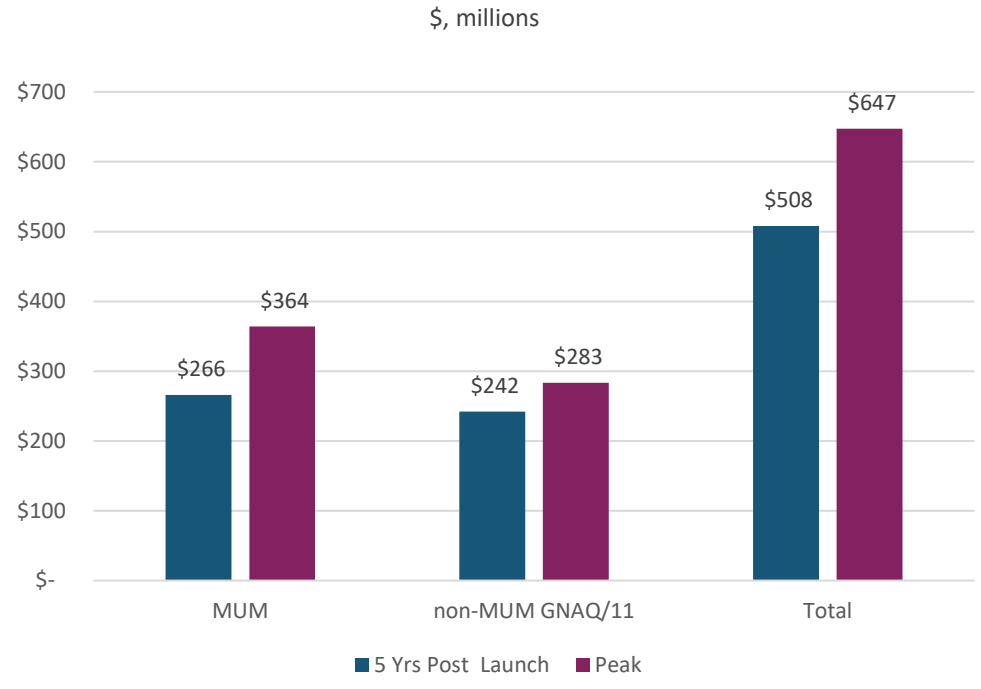
Addressable GNAQ/11 Patients (US/EU5) [1]

No FDA Approved Therapies for MUM or GNAQ/11 Patients



Darovasertib (IDE196) Revenue Projections [2]

Analyst Consensus Projections



[1] Internal Ideaya Data, https://www.cancer.net/cancer-types/eye-cancer/statistics; http://www.ocularmelanoma.org/disease.htm; DecisionDx-UM Castle Biosciences; Foundation Medicine Analysis

[2] IDEAYA Analyst Reports (2021): JP Morgan, Citi, Jefferies, Guggenheim, HC Wainright, Northland, Oppenheimer, Roth, RW Baird, Wedbush

Closing Remarks

Confirmatory Darovasertib Single-Agent Activity & Early Partial Responses in Bini Combo

Darovasertib (IDE196) Monotherapy Efficacy

- Generally, well tolerated AE profile consistent with previously reported (AACR 2019)
- Confirmatory darovasertib monotherapy activity in MUM observed. N = 81 (75 evaluable)
  - 61% of pts observed tumor reduction, 15 pts (20%) with ≥30% target lesion reduction
  - 1-year OS Rate of 57% and median OS 13.2 months. Historical 1-Year OS: 37% and median OS ~7 months*

Darovasertib + Binimetinib Combination Efficacy

- IDE196 + Binimetinib preliminary combination data shows 2 partial responses (PR), including 1 confirmed PR, out of nine evaluable patients with at least 2 post-baseline scans = (22%)
- Program Goal: >20% ORR and enhance IDE196 monotherapy overall survival
  - IMCgp100 ORR in MUM (HLA-A2-0201 selected) is ~4.7%*

Darovasertib Clinical Strategy in MUM is Combination Therapy

- Multiple potential clinical strategies available: 1) IDE196 combination in 1L and 2L, 2) both HLA-status independent, +/- HLA-status, and 3) single-arm ORR and randomized survival endpoint designs
- IDE196 has a differentiated target product profile: Oral tablet and MOA independent of HLA-status

IDEAYA Data (preliminary analysis of unlocked database)
* Historical 1-Year OS and Median OS: Immunocore 2019 Corporate Presentation (Rantala 2019) – Synthetic Control Arm